

CLAIMS

1. A method for the automatic configuration of a determined device (11', 21') of a packet switching data transmission network (1) on which are defined at least one first virtual subnet (1c) for network devices of a first type (11) and at least one second virtual subnet (1d) for network devices of a second type (21), said determined device being physically connected to any one of said first and second virtual subnets and belonging to any one of said first and second types, the method comprising the steps wherein the device performs the steps of:
- sending (71, 91), in broadcast mode over the virtual subnet to which it is physically connected, a first lease request comprising an identifier (TID) of the type to which it belongs;
 - receiving (72-74; 92-94), in response to said first lease request, a first lease containing an address (@IP/1c) on the virtual subnet to which it is physically connected, an identifier (VID) of the virtual subnet of the devices of the type to which it belongs, and, if it does not belong to the type of the devices of the virtual subnet to which it is connected, a cue (TAG) for activating tagging of the frames with said identifier;
 - if said first lease contains said tagging activation cue:
 - releasing (75) said first lease;
 - sending (76), in broadcast mode over the virtual subnet of the devices of the type to which it belongs, a second lease request tagged with said identifier of the virtual subnet of the devices of the type to which it belongs; and
 - receiving (77-79), in response to said second lease request, a second lease containing an address (@IP/1d) on the virtual subnet of the devices of the

type to which it belongs;

- otherwise retaining said first lease.

2. The method as claimed in claim 1, wherein the
5 first lease further contains a priority number (PRIO)
associated with the device, and wherein said second
lease request contains said priority number.

3. The method as claimed in claim 1 or claim 2,
10 wherein the first lease request in broadcast mode is
relayed in uni-recipient mode, via at least one
appropriate router (100), to a first configuration
server (30 - broken lines) which is not physically
connected to the virtual subnet to which the device is
15 physically connected.

4. The method as claimed in any one of claims 1 to 3,
wherein the second lease request in broadcast mode is
relayed in uni-recipient mode, via at least one
20 appropriate router (100), to the first configuration
server or to a second configuration server (30') which
is not physically connected, respectively which are not
connected to the virtual subnet of the devices of the
type to which the device belongs.

25 5. The method as claimed in any one of claims 1 to 4,
wherein the first lease request and the second lease
request are processed by one and the same configuration
server which manages a first address range on the first
30 virtual subnet and a second address range on the second
virtual subnet.

6. The method as claimed in any one of the preceding
claims, wherein the data transmission network is an
35 Ethernet network defined by the IEEE 802.3 standard.

7. The method as claimed in any one of the preceding

claims, wherein the virtual subnets are defined by the IEEE 802.1 Q/P standard.

8. The method as claimed in any one of the preceding
5 claims, wherein the devices of the first type and/or the devices of the second type are terminal devices.

9. The method as claimed in claim 8, wherein the
10 devices of the first type comprise general-purpose computers, and/or wherein the devices of the second type comprise telephone sets.

10. The method as claimed in any one of the preceding
15 claims, wherein the device (21') comprises a switch (50) having an output communication port (51) for the physical link to the network and at least two input communication ports, one (53) of which is adapted for receiving/sending a packet stream from/to the device,
20 and the other (52) of which is adapted for receiving/sending a packet stream from/to a device of the second type (11') if the device is of the first type or from/to a device of the first type if the device is of the second type.

25 11. The method as claimed in any one of claims 3 to 10, wherein the configuration server or servers employ the DHCP configuration protocol.

12. A system comprising a packet switching data
30 transmission network (1) on which are defined at least one first virtual subnet (1c) for network devices of a first type (11) and at least one second virtual subnet (1d) for network devices of a second type (21), further comprising a determined device (11', 21') which is
35 physically connected to any one of said first and second virtual subnets and which belongs to any one of said first and second types, wherein said device is

adapted for implementing a method as claimed in claim 1.

13. The system as claimed in claim 1, wherein the
5 first lease further contains a priority number (PRIO) associated with the device, and wherein said second lease request contains said priority number.

14. The system as claimed in claim 12 or claim 13,
10 further comprising at least one router (100) for relaying, in uni-recipient mode, the first lease request to a first configuration server (30 - broken lines) of the system, which is not physically connected to the virtual subnet to which the device is physically
15 connected.

15. The system as claimed in any one of claims 12 to 14, further comprising a router (100) adapted for relaying, in uni-recipient mode, the second lease
20 request to the first configuration server or to a second configuration server of the system (30') which is not physically connected, respectively which are not connected to the virtual subnet of the devices of the type to which the device belongs.

25 16. The system as claimed in any one of claims 12 to 15, comprising, for processing the first lease request and the second lease request, one and the same configuration server which manages a first address
30 range on the first virtual subnet and a second address range on the second virtual subnet.

17. The system as claimed in any one of claims 12 to 16, wherein the data transmission network is an
35 Ethernet network defined by the IEEE 802.3 standard.

18. The system as claimed in any one of claims 12 to

17, wherein the virtual subnets are defined by the IEEE 802.1 Q/P standard.

19. The system as claimed in any one of the preceding
5 claims, wherein the devices of the first type and/or the devices of the second type are terminal devices.

20. The system as claimed in claim 19, wherein the
10 devices of the first type comprise general-purpose computers, and/or wherein the devices of the second type comprise telephone sets.

21. The system as claimed in one of the claims 12 to
20, wherein the device (21') comprises a switch (50)
15 having an output communication port (51) for the physical link to the network and at least two input communication ports, one (53) of which is adapted for sending/receiving a packet stream from/to the device, and the other (52) of which is adapted for
20 sending/receiving a packet stream from/to a device of the second type (11') if the device is of the first type or from/to a device of the first type if the device is of the second type.

22. The system as claimed in any one of claims 12 to
25 21, wherein the configuration server or servers employ the DHCP configuration protocol.

23. A device of a packet switching data transmission
30 network (1) on which are defined at least one first virtual subnet (1c) for network devices of a first type (11) and at least one second virtual subnet (1d) for network devices of a second type (21), the device belonging to any one of said first and second types and
35 comprising means for executing a method as claimed in claim 1 or claim 2.

24. The device as claimed in claim 23, comprising a switch (50) having an output communication port (51) for the physical link to the network and at least two input communication ports (52, 53), one of which is
5 adapted for receiving/sending a packet stream from/to the device, and the other of which is adapted for receiving/sending a packet stream from/to a device of the second type if the device is of the first type or from a device of the first type if the device is of the
10 second type.